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AUCTION SYSTEM USING NETWORK AND AUCTION PROGRAM
AS WELL AS STORAGE MEDIUM ON WHICH PROGRAM IS STORED

BACKGROUND OF THE INVENTION

5 Field of the Invention

The present invention relates to an auction system, and more particularly to a system and a program for performing an auction using a network.

Description of the Related Art

10 In recent years, personal computers have spread rapidly into common homes, and the frequency in connection to the Internet has been and is increasing. Also portable telephone sets which can be connected to the Internet have been and are being spread, and the Internet connecting population is increasing. As a
15 result, it has been popularized to perform a public sale (Internet auction) or shopping of a commodity on the Internet. Accordingly, the form of transaction of a commodity has become diversified, and it is possible to take part in shopping or
20 an auction on the Internet, that is, to purchase a commodity at home.

25 The Internet auction signifies a transaction in the form of an auction performed on the Internet between a person who wants to sell a commodity at a high price and another person who wants to buy a commodity at a low price without the intervention of an intermediary. Accordingly, a user of a terminal can access a homepage from the terminal to display

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(to register a commodity to be sold into an auction site on the Internet) or bid (that is, a displaying person presents an estimated value of a commodity of the displaying person itself so that a competitor (another bidder) can access it in accordance
5 with the agreement that a displaying person will conclude a contract with a person who has proposed the most favorite condition) for a commodity on the homepage.

The site (auction administrator) which manages personal information of the auction stores displaying persons (personal
10 sellers) and successful bidders (purchasers) into a database, in which such personal information is coordinated with auction commodities which are objects of merchandise. A displaying person registers information of a commodity to be sold into the database, and a successful bidder who proposes the highest
15 value for the commodity becomes the purchaser of the commodity.

More particular, when a person tries to display a commodity in an auction, it first registers its user information into the auction site. The user information in this instance may be basic information of the user such as an address, the full
20 name and the age. As information necessary to display a commodity, selection of a category, an upset price, a method of payment, a method of delivery, a period and so forth as commodity information are entered. Further, where an image is available, it is possible to upload it into the site. Further,
25 the method of payment may be selected from, for example, transfer to a bank account, transfer to a postal transfer account, cash

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5 registration, payment on delivery or payment through a credit
card. As the delivery method, the delivery charge is borne
by the successful bidder or the displaying person. When a
displaying person tries to display a commodity, it will select
and determine favorite ones from among the choices mentioned
above as sales conditions. Then, if any purchaser finds out
a favorite commodity based on a category or through a search
and determines to bid for the commodity, it registers its user
information. Thereafter, the purchaser will bid a desired value
10 for the commodity. If a competitor or competitors are present,
then bidding is performed. Thereafter, when the auction for
the commodity comes to an end with a successful bidder determined,
then such notification is delivered from the auction site to
the displaying person and the successful bidder. In the
15 notification, mail addresses and so forth of the displaying
person and the successful bidder are entered. At this point
of time, the information exchange at the auction site is completed,
and a delivery method of the commodity and a method of payment
for the commodity are determined through exchange of mails
20 between the displaying person and the successful bidder or the
like. However, the method of payment and so forth are normally
performed in accordance with a method registered in advance
by the personal seller.

The conventional Internet auction described above,
25 however, has such disadvantages as described below.

In particular, the conventional auction adopts the form

of personal transaction without an intermediary since the object of it is to allow a personal seller and a purchaser to sell and buy a commodity at a possible minimum cost. Accordingly, although the auction provides high merits to them in terms of the transaction of a commodity, the charge for delivery is always present as a cost other than the expenses for the transaction. In other words, there is a problem that a seller or a purchaser must bear the charge for delivery of an auction commodity.

Further, also such a situation that a seller and a purchaser dispute each other regarding which one of the seller and the purchaser should bear the charge for delivery occurs, and this gives rise to a problem that the transaction does not proceed smoothly.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide an auction system by which reduction of the charge for delivery to be borne by parties in an auction is achieved while the merits to the parties by the auction are assured thereby to achieve activation of the auction.

In order to attain the object described above, according to an aspect of the present invention, there is provided an auction system, comprising a plurality of user terminals, and a server connected to the user terminals through a network and having an auction site formed therein for receiving bids from the user terminals and determining a successful bidder for an

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5 auction function for receiving bidding information from the participant terminals based on the auction commodity information and determining a successful bidder based on the bidding information, the auction server further having a dealer information reception storage function for receiving, from a dealer terminal owned by a predetermined dealer and connected to the auction server through the network, and storing dealer provision information including dealer commodity information which is information regarding a commodity to be sold by the dealer and delivery charge information which is information regarding the charge for delivery to be borne by the dealer in place of the person who purchases the dealer commodity, the auction information transmission function placing and transmitting the dealer provision information into and together with the information to be transmitted to the participant terminal, the auction function receiving purchase desired commodity information corresponding to the dealer provision information transmitted from the participant terminals together with the bidding information.

20 With the auction system, auction commodity information and dealer provision information are transmitted to each participant terminal, and an auction participant who operates its participant terminal can acquire information required for an auction commodity, information regarding a commodity to be sold by a predetermined dealer and information regarding the delivery charge to be borne by the dealer. Then, the participant

can bid a predetermined price for the auction commodity through
the participant terminal to the auction terminal and transmit
information of a hope of purchase of the commodity to be sold
by the dealer. Accordingly, if the participant purchases the
5 commodity to be sold by the dealer, then since part or all of
the delivery charge for the commodity and/or the auction
commodity is borne by the dealer, suppression of the delivery
cost for the auction commodity to be borne by a personal seller
or the participant can be anticipated, and activation of the
10 auction can be anticipated.

Preferably, the auction server further has an information
classification function for classifying the auction commodity
information from the personal seller terminals based on the
auction commodity information and classifying the dealer
15 provision information including the dealer commodity
information from the dealer terminal based on the dealer
commodity information, and a link registration function for
linking the auction commodity information and the dealer
provision information based on the classifications by the
20 information classification function, and the auction
information transmission function transmits the auction
commodity information and the dealer provision information
linked to each other by the link registration function to the
participant terminal.

25 Further preferably, the auction commodity information
regarding each auction commodity includes information for

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specifying a classification of the auction commodity, and the dealer commodity information regarding the dealer commodity included in the dealer provision information includes information for specifying a classification of the dealer commodity.

With the auction system, auction commodity information and dealer provision information are classified based on the auction commodity information and dealer commodity information, for example, based on a commodity name included in the auction commodity information and the dealer commodity information, and the information is linked to each other based on the classifications. Then, the information linked to each other is transmitted to a pertaining participant terminal. Consequently, a participant of the participant terminal can recognize that a commodity relating to the auction commodity is sold from a dealer, and therefore can purchase the dealer commodity relating to the auction commodity simultaneously upon bidding performed for the auction commodity. Therefore, the participant can purchase the dealer commodity and can readily utilize bearing of the delivery charge by the dealer. As a result, reduction of the delivery charge to be borne by the parties to the auction can be anticipated, and activation of the auction can be anticipated.

The auction system may be configured such that the auction server further has a delivery information reception storage function for receiving and storing distribution information

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of a plurality of predetermined distributors from distributor terminals owned by the distributors and connected to the auction server through the network, and the auction information reception storage function transmits, when auction commodity information is received from any of the personal seller terminals, the delivery information to the personal seller terminal and receives first distributor designation information which designates one of the distributors which is entrusted with delivery of the auction commodity by the personal seller while the dealer information reception storage function transmits, when auction commodity information is received from the dealer terminal, the delivery information to the personal seller terminal and receives second distributor designation information which designates one of the distributors which is entrusted with delivery of the dealer commodity by the dealer, the information classification function classifying the auction commodity information and the dealer provision information based on the first distributor designation information and the second distributor designation information.

With the auction system, an auction commodity and a dealer commodity are combined based on information of a distributor who is entrusted with delivery of the commodities, and are sold in the combined state. Accordingly, when a participant purchases commodities in combination, since the commodities are delivered by a single distributor, suppression of the delivery charge can be anticipated.

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According to a further aspect of the present invention, there is provided an auction system, comprising a plurality of personal seller terminals and a plurality of participant terminals, and an auction server connected to the personal seller
5 terminals and the participant terminals through a network, the auction server having an auction information reception storage function for receiving and storing auction commodity information from the personal seller terminals, an auction information transmission function for transmitting the auction
10 commodity information to any of the participant terminals in response to a request from the participant terminal, and an auction function for receiving bidding information from the participant terminals based on the auction commodity information and determining a successful bidder based on the
15 bidding information, the auction server further having a dealer information reception storage function for receiving, from a dealer terminal owned by a predetermined dealer and connected to the auction server through the network, and storing dealer provision information including dealer commodity information
20 which is information regarding a commodity to be sold by the dealer and delivery charge information which is information regarding the charge for delivery to be borne by the dealer in place of the person who purchases the dealer commodity, the auction information reception storage function transmitting,
25 when auction commodity information is received from any of the personal seller terminals, the dealer provision information

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to the personal seller terminal, whereafter the auction information reception storage function issues a request to select one of commodities in the dealer commodity information included in the dealer provision information and desired to
5 be sold together with the auction commodity by the personal dealer and then receives commodity selection information from the personal seller terminal transmitted thereto in response to the request, the auction information transmission function placing the commodity selection information into the
10 information to be transmitted to the participant terminal, the auction function receiving purchase desired commodity information corresponding to the commodity selection information transmitted from the participant terminals together with the bidding information.

15 With the auction system, when auction commodity information is transmitted from a personal seller terminal, dealer provision information is transmitted from the auction server to the personal seller terminal. Then, information of selection of a commodity which the personal seller hopes to
20 sell together with the auction commodity based on the thus transmitted information, for example, based on dealer commodity information, is transmitted from the personal seller terminal to the auction server. The information of the combination is transmitted to each participant terminal. Consequently, the
25 participant of the participant terminal can select a commodity to be purchased from among commodities combined with the auction

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commodity. Accordingly, since commodities which can be sold
in combination with an auction commodity are set in advance
and presented to each participant, the participant can
selectively purchase one of the commodities thus combined. As
5 a result, the opportunity in which each participant purchases
an auction commodity and a dealer commodity in combination
increases, and each participant can readily utilize bearing
of the delivery charge of the dealer and suppression of the
delivery cost for the auction commodity can be anticipated.

10 The commodity selection information may be information
for selection of one commodity. In the auction system just
described, since a commodity to be sold in combination with
an auction commodity is set in advance, if the auction commodity
and the dealer commodity are purchased, then since delivery
15 charge is automatically borne by the dealer, augmentation of
the convenience of the auction can be anticipated.

According to a still further aspect of the present
invention, there is provided an auction system, comprising a
plurality of personal seller terminals and a plurality of
20 participant terminals, and an auction server connected to the
personal seller terminals and the participant terminals through
a network, the auction server having an auction information
reception storage function for receiving and storing auction
commodity information from the personal seller terminals, an
25 auction information transmission function for transmitting the
auction commodity information to any of the participant

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terminals in response to a request from the participant terminal, and an auction function for receiving bidding information from the participant terminals based on the auction commodity information and determining a successful bidder based on the bidding information, the auction server further having a dealer information reception storage function for transmitting the auction commodity information to a dealer terminal owned by a predetermined dealer and connected to the auction server through the network and receiving from the dealer terminal and storing dealer provision information including dealer commodity information which is information regarding a commodity to be sold by the dealer, auction commodity designation information which designates one of the auction commodities which the dealer hopes to be purchased together with the dealer commodity and delivery charge information which is information regarding the charge for delivery to be borne by the dealer in place of the person who purchases the dealer commodity, the auction information transmission function placing and transmitting the dealer provision information into and together with the information to be transmitted to the participant terminal.

With the auction system, auction commodity information is transmitted to a dealer terminal, and information which designates an auction commodity which the dealer wants to sell together with a commodity to be sold by the dealer is transmitted from the dealer terminal to the auction server. Then, information of the combination of the commodities is transmitted

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to each participant terminal. Accordingly, since an auction
commodity and a dealer commodity combined in advance are sold,
the opportunity in which the parties to the auction utilize
bearing of the delivery charge by the dealer increases, and
5 suppression of the delivery cost can be anticipated and
activation of the auction can be anticipated.

Also in this instance, the auction commodity designation
information is information which designates one of the auction
commodities. This provides such an advantage as described
10 above.

Each of the auction systems according to the second to
fourth aspects of the present invention described above may
be configured such that the auction server further has a delivery
information reception storage function for receiving and
15 storing distribution information of a predetermined distributor
from a distributor terminal owned by the distributor and
connected to the auction server through the network, and the
auction information transmission function places and transmits
the delivery information into and together with the information
20 to be transmitted to the participant terminal while the auction
function receives distributor designation information based
on the delivery information from the participant terminal.

With the auction systems, information regarding each
distributor is transmitted from the distributor terminal of
25 the distributor to each participant terminal through the auction
server. Then, the participant of the participant terminal

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function for transmitting dealer provision information including dealer commodity information which is information regarding a commodity to be sold by the dealer and delivery charge information which is information regarding the charge for delivery to be borne by the dealer in place of the person who purchases the dealer commodity to the auction server, the auction server further having a dealer information reception storage function for receiving and storing the dealer provision information, the auction information transmission function of the auction server placing and transmitting the dealer provision information into and together with the information to be transmitted to the participant terminal, each of the participant terminals having a bidding function for transmitting purchase desired commodity information corresponding to the dealer provision information to the auction server together with the bidding information, the auction function of the auction server receiving the purchase desired commodity information corresponding to the dealer provision information transmitted from the participant terminal together with the bidding information.

The auction system may be configured such that it further comprises a distributor terminal owned by a predetermined distributor and connected to the auction server through the network, and the distributor terminal has a delivery information transmission function for transmitting delivery information of the distributor to the auction server and the auction server

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has a delivery information reception storage function for receiving and storing the delivery information from the distributor terminal, the auction information transmission function of the auction server placing and transmitting the
5 delivery information into and together with the information to be transmitted to the participant terminal, the bidding function of the participant terminal transmitting distributor designation information based on the delivery information to the auction server together with the bidding information and
10 the purchase desired commodity information, the auction function of the auction server receiving the distributor designation information from the participant terminal.

According to a yet further aspect of the present invention, there is provided an auction program for causing an auction
15 server connected to a plurality of personal seller terminals, a plurality of participant terminals and a dealer terminal owned by a predetermined dealer through a network to execute an auction information reception storage process for receiving and storing
20 auction commodity information from the personal seller terminals, a dealer information reception storage process for receiving from the dealer terminal and storing dealer provision information including dealer commodity information which is information regarding a commodity to be sold by the dealer and
25 delivery charge information which is information regarding the charge for delivery to be borne by the dealer in place of the person who purchases the dealer commodity, an auction

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information transmission process for transmitting the auction commodity information and the dealer provision information to any of the participant terminals in response to a request from the participant terminal, and an auction process for receiving
5 bidding information from the participant terminals based on the auction commodity information and purchase desired commodity information corresponding to the dealer provision information and determining a successful bidder based on the bidding information.

10 According to an additional aspect of the present invention, there is provided a recording medium on which the auction program described above is stored.

In summary, according to the present invention, if a dealer commodity to be sold in combination with an auction commodity
15 is purchased, then since part or all of the delivery charges for the commodities is borne by the dealer who sells the dealer commodity, such superior advantages that reduction of the delivery charge to be borne by the parties who sell and buy in the auction can be anticipated and that activation of the
20 auction can be anticipated are achieved.

Further, since an auction commodity and a dealer commodity or commodities which relate to each other are displayed in combination, each participant can purchase a dealer commodity relating to the auction commodity simultaneously upon bidding
25 performed for the auction commodity. Therefore, the participant can purchase the dealer commodity readily and can

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readily utilize bearing of the delivery charge by the dealer. As a result, reduction of the delivery charge to be borne by the parties to the auction can be anticipated, and activation of the auction can be anticipated.

5 Further, where a single distributor can be entrusted with delivery of an auction commodity and a dealer commodity, suppression of the delivery charge can be anticipated.

The above and other objects, features and advantages of the present invention will become apparent from the following
10 description and the appended claims, taken in conjunction with the accompanying drawings in which like parts or elements are denoted by like reference symbols.

BRIEF DESCRIPTION OF THE DRAWINGS

15 FIG. 1(A) is a block diagram showing a configuration of an auction system to which the present invention is applied;

FIG. 1(B) is a block diagram illustrating functions of a server control section of an auction server of the auction system shown in FIG. 1(A);

20 FIG. 2 is a diagrammatic view illustrating a table of site user information from within a database stored in the auction server shown in FIG. 1(A);

FIG. 3 is a diagrammatic view illustrating a table of auction commodity information from within the database stored
25 in the auction server shown in FIG. 1(A);

FIG. 4 is a diagrammatic view illustrating a table of

dealer information from within the database stored in the auction server shown in FIG. 1(A);

FIG. 5 is a diagrammatic view illustrating a table of dealer commodity information from within the database stored in the auction server shown in FIG. 1(A);

FIG. 6 is a diagrammatic view illustrating a table of distributor information from within the database stored in the auction server shown in FIG. 1(A);

FIG. 7 is a schematic view showing a user interface displayed on a participant terminal shown in FIG. 1(A);

FIG. 8 is a flow diagram illustrating operation of parties registered in the system shown in FIG. 1(A);

FIG. 9 is a sequence diagram illustrating operation of the system shown in FIG. 1(A); and

FIG. 10 is a similar view but illustrating operation of a modification to the system shown in FIG. 1(A).

DESCRIPTION OF THE PREFERRED EMBODIMENT

Preferred Embodiment

Referring first to FIG. 1(A), there is shown an auction system to which the present invention is applied. The network system utilizes a network 2 and includes an auction server 1 which holds an auction site. To the auction server 1, a plurality of personal seller terminals 3 (only one is shown) each owned by a personal seller who displays an auction commodity in the auction, a plurality of participant terminals 4 (only one is

shown) each owned by a participant (purchaser) who tries to bid, a plurality of dealer terminals 5 (only one is shown) each owned by a commodity (dealer commodity or commodity for which the charge for delivery should be borne) which may be purchased
5 by a participant together with such an auction commodity mentioned above, and a plurality of distributor terminals 6 (only one is shown) each owned by a distributor who distributes a commodity transacted in an auction are connected through the network 2.

10 The terminals 3, 4, 5 and 6 described above can access the auction site formed by the auction server 1, and information necessary for an auction such as personal information and commodity information is inputted from the terminals 3, 4, 5 and 6 to the auction site so that a database is constructed
15 in the auction server 1. Different pieces of information in the database are linked such that information necessary for each transaction is combined. Predetermined processing is performed by the auction server 1 based on the information of the database to perform an auction of a commodity. An auction
20 is performed in this manner.

First, general operation of the auction system is described.

General Operation

First, site users (personal sellers or participants)
25 register their personal information such as an address or a name. Further, each personal seller registers, as information

relating to a commodity to be displayed in an auction when the
auction commodity (commodity for auction) is to be sold, a
category, a size, a weight, sales conditions and so forth of
the commodity. Here, if the personal seller wants to sell the
5 auction commodity in a combination display (a display method
wherein an auction commodity and a commodity to be sold by a
dealer are sold in combination), then the auction commodity
is coordinated with the dealer commodity.

Also each dealer similarly registers basic information
10 such as an address and a company name as dealer information
in advance and registers dealer commodity information into a
table. Then, as regards a commodity to be displayed in a
combination display, it is coordinated with an auction commodity.
Further, also a table in which a ratio at which the charge for
15 delivery is to be borne with regard to a commodity to be displayed
by a personal seller is registered is constructed in the database.
Here, the bearing of the charge for delivery signifies that,
when a dealer commodity is purchased in combination with an
auction commodity, the dealer bears the charge for delivery.
20 For example, if a dealer commodity or commodities are purchased
by more than 5,000 yen, then the charge for delivery for the
auction commodity or commodities is borne by up to 500 yen by
the dealer.

Consequently, a participant who purchases an auction
25 commodity and a dealer commodity in combination has part or
all of the charge for delivery of the purchased commodities

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borne by the dealer.

In the following, the auction system is described in more detail.

Auction Server

5 The auction server 1 is a server computer managed by a dealer who administrates an auction using the network 2. The auction server 1 executes a server program stored on a recording medium such as a CD-ROM so that it operates as a Web site which provides predetermined contents. The auction server 1 includes
10 a server control section which arithmetically operates predetermined information from the other terminals on the network 2 and controls operation of the entire auction server 1, and a server storage section having a predetermined storage capacity. In particular, the server control section is a
15 central processing unit (CPU), and the server storage section is a storage medium such as a hard disk.

 The auction server 1 holds an auction site as a Web site to perform an auction on the network. In particular, the server control section of the auction server 1 is provided with functions
20 necessary to perform an auction, and the server storage section has a database constructed therein which includes a plurality of information tables necessary for the auction.

 The database includes five tables (refer to FIGS. 2 to 6) for site users (personal dealers and participants), dealers
25 (sales traders) who sell commodities on the network, distributors, commodities (auction commodities) displayed in

information necessary for calculation of the charge for delivery,
a dealer commodity ID of a commodity (dealer commodity) displayed
for combination, a bearing ratio of the charge for delivery
of the combination commodity to be purchased, and a combination
5 transaction ID currently in transaction.

FIG. 5 illustrates the table for dealer commodity
information. Referring to FIG. 5, the table includes
information of a dealer commodity ID, a dealer ID of the commodity,
and a size, a weight and a category registration as attribute
10 information of the commodity. Where the commodity is a
combination display, the table additionally includes
combination transaction information.

FIG. 6 illustrates the table for distributor information.
Referring to FIG. 6, the table stores information of a distributor
15 ID, a location and a distribution area of a service office of
a distribution lodgment, and a charge system wherein the charge
depends upon the size, the weight and so forth. Also a
combination transaction ID for confirmation of a transaction
situation of a combination commodity is stored in the table.

Here, various functions of the server control section
of the auction server 1 are described. Referring to FIG. 1(B),
the server control section has a user registration function
for registering a displaying person in or a participant to an
auction or the like, an auction information reception storage
25 function for receiving and storing auction commodity
information from the personal seller terminals 3, an auction

information transmission function for transmitting auction commodity information to a participant terminal 4 in response to a request from the participant terminal 4, and an auction function for receiving bidding information from the participant
5 terminals 4 based on the auction commodity information and determining a successful bidder based on the bidding information.

The server control section further has a dealer information reception storage function for receiving, from any
10 of the dealer terminals 5 each owned by a predetermined dealer and connected to the auction server 1 by the network 2, and storing dealer provision information including dealer commodity information which is information regarding a commodity to be sold by the dealer and delivery charge information which is
15 information regarding the charge for delivery to be borne by the dealer in place of a person who purchases the dealer commodity, a delivery information reception storage function for receiving and storing distribution information of distributors from the distributor terminals 6 of the distributors, an information
20 classification function for classifying auction commodity information from the personal seller terminals 3 based on the auction commodity information and classifying dealer provision information including dealer commodity information from the dealer terminals 5 based on the dealer commodity information,
25 and a link registration function for linking the auction commodity information and the dealer provision information

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based on the classifications by the information classification function. In the following, the functions mentioned are individually described in detail.

The user registration function performs user registration so that, when a general user who desires to display an auction commodity or purchase (bid) some other auction commodity in an auction uses a terminal of the user itself to access the auction site, the general user can utilize the site. More particularly, the user registration function first requests the general user for information of an address, a mail address and so forth. Then, the user registration function issues a user ID which is information for identification and issues a password for confirmation of the user who accesses the site. Then, the user registration function stores the information from the user into the server storage section together with the user ID to produce such a site user information table as illustrated in FIG. 2.

The auction information reception storage function receives such display information as described above, that is, information (auction commodity information) regarding an auction commodity to be displayed by a personal seller, from its personal seller terminal 3 and stores the information into the server storage section. In this instance, an auction commodity ID is allocated to the auction commodity information as described above, and particulars of the same are stored into such a table as illustrated in FIG. 3. Further, the information

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is linked to the user (personal seller) illustrated in FIG. 2 based on the auction commodity ID.

Further, the auction information reception storage function transmits, when it receives auction commodity information from a personal seller terminal 3, dealer provision information to the personal seller terminal 3 and issues a request to select one of commodities in the dealer commodity information included in the dealer provision information and desired to be sold together with the auction commodity by the personal dealer. Then, the auction information reception storage function receives commodity selection information from the personal seller terminal 3 transmitted in response to the request. Accordingly, the auction server 1 receiving the information enters an ID of the sales commodity to be combined into a place for the combination transaction information illustrated in FIG. 2 based on information from the personal seller who desires to sell its sales commodity by combination sales with the auction commodity to register the sales commodity. Here, the commodity selection information which is information that the personal seller selects a commodity to be sold in combination may be information for selection of a plurality of commodities or information for selection of a single commodity.

The dealer information reception storage function receives, from a dealer terminal 5, such information of the dealer and so forth as described above with reference to FIGS. 3 and 4 and stores the received information into the server storage

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section. At this time, a unique ID is provided to each of dealer commodities (delivery charge bearing object commodities) to be sold by the dealer, and detailed information of each of the dealer commodities is coordinated with the dealer.

5 Further, the dealer information reception storage function receives and stores dealer provision information including auction commodity information transmitted from the auction server 1 to a dealer terminal 5 in advance and auction commodity designation information which is transmitted from
10 the dealer terminal 5 based on the auction commodity information and designates an auction commodity which the dealer desires to be purchased together with a dealer commodity. In other words, the dealer can designate an auction commodity to be sold in combination with a sales commodity sold by the dealer itself.
15 Here, the auction commodity designation information which designates an auction commodity to be sold in combination may designate selection of a plurality of commodities or of a single commodity.

The delivery information reception storage function
20 receives such delivery information as described with reference to FIG. 6 from a distributor terminal 6 and stores the received delivery information. If a personal seller or a dealer entrusts a particular distributor with delivery of a commodity sold by itself, then the auction commodity information or the dealer
25 commodity information includes distributor information (ID), and the delivery information includes the commodity information

as combination transaction information. In other words, a distributor and an auction commodity or a dealer commodity are coordinated with each other.

5 The information classification function classifies auction commodity information and dealer provision information based on information of a commodity name of a commodity and so forth included in the auction commodity information and the dealer commodity information. For example, if the auction commodity is "shoes" and the dealer commodity is a "shoe-horn",
10 then the two commodities are classified so that they may belong to the same class.

The link registration function links pieces of information, which include commodities discriminated to belong to the same class, to each other. In particular, information
15 which specifies that information in which commodities linked to each other are included is placed in the combination transaction ID illustrated in FIG. 2 and so forth. An auction commodity or commodities and a dealer commodity or commodities are combined in this manner.

20 The auction information transmission function transmits auction commodity information stored in the server storage section to a participant terminal 4 having a user registration in the auction server 1 when the participant terminal 4 accesses the auction site and requests the auction site for information
25 of auction commodities. In this instance, for example, the auction site includes a search engine for auction commodities

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and searches for a commodity desired to be purchased by the participant terminal 4. Then, if the participant requests the auction site to access the searched out commodity information, then the auction commodity information is transmitted to the participant terminal 4 by the auction information transmission function. At this time, also dealer provision information including information of sales commodities to be sold by dealers is transmitted to the participant terminal 4. The dealer provision information to be transmitted in this instance is information of a particular dealer commodity or commodities linked to the auction commodity of an object of the request of the participant by the link registration function described above.

Further, where an auction commodity and a dealer commodity are combined with each other in advance by a personal seller or a dealer as described hereinabove, the auction information transmission function transmits auction commodity information and dealer provision information which include information relating to the auction commodity or dealer commodity based on the combination to the participant terminal 4.

An example of information transmitted to the participant terminal 4 by the auction information transmission function is described with reference to FIG. 7. FIG. 7 shows a screen displayed on a display unit of the participant terminal 4. Referring to FIG. 7, the left side half of the display screen indicates information of an object of request for accessing

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as a result of search of the auction site by a participant,
that is, information regarding an auction commodity. In the
example shown in FIG. 7, the auction commodity is "shoes", and
also the lowest bid price is displayed. Meanwhile, on the right
5 half side of the display screen of FIG. 7, dealer commodities
linked to the "shoes" of the auction commodity are displayed.
Consequently, when a participant tries to bid the auction
commodity, it can take also purchase of a commodity (dealer
commodity) linked to the auction commodity into consideration.
10 Further, if the participant purchases a dealer commodity, then
since a predetermined delivery charge is borne by the dealer
of the dealer commodity, the participant can anticipate
suppression of the delivery cost of the commodity purchased
in the auction.

15 Here, the auction information transmission function may
place and transmit the delivery information into and together
with the information to be transmitted to the participant
terminal 4. The delivery information is information relating
to delivery of a distributor described hereinabove with
20 reference to FIG. 6. Consequently, a participant can designate
a distributor whose delivery charge is less expensive as well.

The auction function receives bid information for a
commodity from the participant terminals 4 and compares the
bid prices of the received bid information for the commodity
25 with one another to determine that participant which has
exhibited the highest bid price as a successful bidder for the

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5 auction commodity. After the determination of the successful bidder, the auction function notifies, for example, the participant terminal 4 of the successful bidder and the personal dealer terminal 3 of the contract price and mutual contact addresses of them. Further, the auction function receives purchase desired commodity information corresponding to dealer provision information transmitted together with the bid information from the participant terminal. In particular, such an auction commodity and a dealer commodity or commodities as shown in FIG. 7 are transmitted to the participant terminal 10 4 as described hereinabove, and if the participant hopes to purchase the dealer commodity or any of the dealer commodities together with the bidding, then the information of the hope of the purchase is transmitted from the participant terminal 15 4 and received by the auction function.

Further, the auction function may receive distributor designation information based on delivery information from a participant terminal 4. This is a function of receiving information that a distributor to be entrusted with delivery 20 of a commodity purchased by a participant is designated and determining a distributor by which the commodity should be delivered.

The functions of the server control section of the auction server 1 described above can be implemented by the control section 25 (CPU) executing programs for the individual functions, that is, an auction program in which a network is employed. For

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example, the auction program includes sub programs for causing the auction server 1 connected to the personal seller terminals 3, participant terminals 4 and the dealer terminals 5 of predetermined dealers by the network 2 to execute an auction information reception storage process for receiving and storing auction commodity information from a personal seller terminal 3, a dealer information reception storage process for receiving from a dealer terminal 5 and storing dealer provision information including dealer commodity information which is information relating to a commodity or commodities to be sold by the dealer and delivery charge information which is information regarding a delivery charge to be borne by the dealer in place of a person who purchases the dealer commodity, an auction information transmission process for transmitting auction commodity information and dealer provision information to a participant terminal 4 in response to a request from the participant terminal 4, and an auction process for receiving bid information based on auction commodity information from the participant terminals 4 and purchase desired commodity information corresponding to dealer provision information and determining a successful bidder based on the bid information. The auction program is read out from a medium which can be carried such as a CD-ROM or downloaded from some other computer on the network 2 and installed into the auction server 1.

25 <Network>

The network 2 is the Internet wherein a dedicated line,

a telephone network, a cable of a CATV or the like is used to perform communication in accordance with the TCP/IP protocol. However, the network 2 may otherwise be an intra-network which operates in a particular organization or some other particular network wherein some other protocol than the TCP/IP protocol is used for communication.

<Personal Seller Terminal>

The personal seller terminal 3 is a terminal (user terminal) owned by a personal seller who displays an auction commodity in the auction system which employs a network according to the present invention. The personal seller terminal 3 can be connected to the network 2 and has predetermined communications means and a communication function. For example, the personal seller terminal 3 is a personal computer having a processing section having a predetermined processing capacity and a storage section having a predetermined storage capacity and further including basic components of a computer such as a display section such as a display unit and an inputting section such as a keyboard and/or a mouse. However, the personal seller terminal 3 is not limited to the personal computer but may be a portable information terminal such as a portable telephone set or an electronic notebook.

The personal seller terminal 3 has an access function for accessing the auction site held on the auction server 1 and a function for transmitting and receiving predetermined information to and from the auction site. The personal seller

terminal 3 can use the functions mentioned to transmit and receive various kinds of information to and from the auction server 1 as described above.

<Participant Terminal>

5 The participant terminal 4 is a terminal (user terminal) owned by a person who participates in an auction on the network and performs bidding for an auction commodity displayed in the auction. Here, the participant may be a personal seller described above. In other words, the participant may display
10 an auction commodity and bid for some other auction article.

 The participant terminal 4 is a terminal which can be connected to the network 2 such as a personal computer similarly to the personal seller terminal 3 described above. The participant terminal 4 can transmit and receive various kinds
15 of information to and from the auction server 1.

<Sales Trader Terminal>

 The dealer terminal 5 is a terminal owned by a dealer who sells not an auction commodity but a commodity handled by the dealer (that is, a dealer commodity or a delivery charge
20 bearing object commodity). In particular, the dealer registers a dealer commodity or commodities into the auction site so as to be purchased, by a participant who purchases an auction commodity, together with the auction commodity in the auction and requests the auction site to exhibit the dealer commodity
25 or commodities. Thereafter, the dealer commodity or commodities are displayed. Then, the dealer bears part or all

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of the delivery discharge of the auction commodity and the dealer commodity or commodities for the participant who purchases the dealer commodity or commodities in combination with the auction commodity.

5 The dealer terminal 5 is a terminal which can be connected to the network 2 such as a personal computer similarly to the personal seller terminal 3 described hereinabove. The dealer terminal 5 can transmit and receive various kinds of information to and from the auction server 1.

10 <Distributor Terminal>

 The distributor terminal 6 is a terminal owned by a distributor who distributes an auction commodity or a dealer commodity sold or purchased in an auction on the network. The distributor is designated by a participant after determination
15 of purchase of a commodity or by a personal seller or a dealer when a commodity is displayed.

 The distributor terminal 6 is a terminal which can be connected to the network 2 such as a personal computer similarly to the personal seller terminal 3 described hereinabove. The
20 distributor terminal 6 can transmit and receive various kinds of information to and from the auction server 1.

<Operation>

 Now, operation of the auction system described above is described in detail with reference to FIGS. 8 and 9. FIG. 8
25 illustrates operation of a person who registers into the system, and FIG. 9 illustrates operation of the terminals 3, 4, 5 and

6 of the system. It is to be noted that the user ID of a participant 41 is "abc"; the user ID of a personal seller 31 is "def"; the dealer ID of a dealer 51 is "Maruyama Trading"; and the distributor ID of a distributor 61 is "TK Express Distribution" or "MM Express Distribution".

First, as preparations in advance, each of site users (the participant 41 and the personal seller 31) accesses the auction server (site) 1 to perform site use registration so that it can thereafter use the auction site. In this instance, the personal seller 31 transmits its user ID (for example, "abc") and address (for example, "No. 1234, Xa-cho, Qa-ku, Yokohama-shi") as personal information to be placed into a table described hereinabove with reference to FIG. 2 from the personal seller terminal 3 to the auction server 1 (step S1). Then, the auction server 1 receiving the personal information produces a site user table 12 in the database 11 provided in the server storage section of the auction server 1 and registers the personal information as the table 12 of the site user into the database 11 (step S3). This similarly applies to any other site user (the participant 41) (steps S2 and S3).

Further, in this instance, the personal seller 31 transmits information (refer to FIG. 3) regarding an auction commodity, which is a commodity to be displayed in an auction, to the auction server 1 (L1). The information received by the auction server 1 is registered into the database 11 in a linked relationship to the information (refer to FIG. 2) of the site

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user.

Similarly, the dealer 51 transmits its dealer ID (for example, "Maruyama Trading") and address (for example, "No. 1111, Xe-cho, Qe-ku, Saitama-shi") as company information and a dealer commodity ID as information of a commodity to be displayed from the dealer terminal 5 to the auction server 1 so as to be registered into such a table as described hereinabove with reference to FIG. 5 (step S4, L2). In this instance, also information regarding a delivery charge bearing ratio as delivery charge information (for example, information that "200 yen is borne if a commodity or commodities whose price is lower than 5,000 yen are purchased, but 500 yen is borne if a commodity or commodities whose price is equal to or higher than 5,000 yen are purchased" is transmitted. The auction server 1 receiving the information produces a table 13 regarding trader information in the database 11 and registers the information into the database 11 (step S5). This similarly applies to any other dealer.

Further, the distributor 61 transmits information regarding delivery (such as company information and a delivery charge) to be registered into such a table as described hereinabove with reference to FIG. 6 from the distributor terminal 6 to the auction server 1 so that a table 14 of the information may be registered into the database 11 in a similar manner as described above.

Then, if the personal seller 31 or the dealer 51 hopes

to sell some commodity in combination with a commodity to be
displayed by itself, it transmits its display hope to the auction
server 1 (step S6 or S7). In particular, when the personal
seller terminal 3 displays its auction commodity, dealer
5 commodity information is transmitted to the personal seller
terminal 3, and the personal seller 31 selects a combination
commodity based on the information. This similarly applies
to the dealer 51. Such combination display hopes from the
personal seller 31 and the dealer 51 are received by the auction
server 1.

Thereafter, combination transaction IDs for the
combination commodities from the table 13 of trader information
and the table 12 of the site user are added to the pertaining
tables (refer to FIGS. 2 to 5) to establish a link between the
auction display commodity (auction commodity) and the dealer
commodity or commodities (step S8). Thereafter, the displaying
preparations of the auction are completed and the commodities
are displayed (step S9).

If information that a commodity should be sold in
combination in advance is not available as in step S6 or S7,
then linkage based on commodity names by the link registration
function or the like described hereinabove may otherwise be
performed. However, such linkage need not necessarily be
performed.

Then, the participant 41 accesses the auction site from
the participant terminal 4 of itself and requests the auction

site for accessing to auction commodities (step S10). Then, in response to the request, information of the auction commodities and the dealer commodities is transmitted from the auction server 1 to the personal seller terminal 3. The auction
5 site includes a system for searching for an auction commodity, and the participant 41 can search for an object commodity. Such search can be performed from both of the dealer commodities and the auction commodities. As regards combination commodities, commodities combined in advance by the personal
10 seller 31 or the like or commodities classified in the same category are displayed on the display screen of the personal seller terminal 3.

For example, an example wherein the auction site executes a category search is described. If desirable commodities are
15 searched out and selected from within a category of the auction site by the search described above, then such a display screen as shown in FIG. 7 is displayed on the participant terminal 4. In the screen display of FIG. 7, the search category is "shoes", and shoes as an auction commodity in the currently
20 proceeding auction are displayed on the left side half of the display screen. Further, a plurality of commodities relating to the "shoes" as the dealer commodity are displayed in a form combined with the auction commodity on the right side half of the display screen. The combination commodities are displayed
25 based on the linkage established between the auction commodity table and the dealer commodity table in the database 11 as

described above.

Then, the participant 41 whose user ID is "abc" accesses the auction commodity "shoes" and the dealer commodity "shoes rack" shown in FIG. 7 (step S10) and bids for the "shoes". It is assumed that the participant 41 becomes a successful bidder of the auction commodity (step S11, L3). Particularly, it is assumed that the participant 41 becomes a successful bidder of the auction commodity "shoes" for 2,000 yen and purchases the dealer commodity "shoes rack" for 7,500 yen. It is to be noted that the delivery charge for the dealer commodity is included in the commodity price. Since the procedure and processing until the sales price is determined in the auction do not have a direct relationship to the present invention, description of them is omitted herein.

Then, the auction regarding the "shoes" displayed by the personal seller 31 of "abc" comes to an end with the determination of the successful bidder, and upon the ending, a successful bidder determination notification is sent from the auction server 1 to the dealer 51 of "Maruyama Trading" and the personal seller 31 of "abc" (step S12). In this instance, the personal seller 31 receives the successful bidder determination notification from the auction site (step S12) and confirms the transaction information (step S13). Meanwhile, the dealer 51 receives the successful bidder determination notification (step S12) and a result of delivery charge bearing calculation (step S14) performed by the auction site from the auction site and

confirms the transaction information (including the delivery charge bearing ratio) (step S15).

5 In the example described, the delivery charge bearing ratio of the dealer 51 is 500 yen because the price of the show rack of "Maruyama Trading" of the dealer 51 is 7,500 yen (refer to FIG. 4). In other words, from within the delivery charge required for the delivery of the auction commodity and the dealer commodity, the dealer 51 bears 500 yen. In this instance, since the addresses of the participant 41 of "abc" who purchases the commodities and the personal seller 31 of "def" who displayed the auction commodity are in a national capital region, the delivery charge required where the distributor "TK Express Distribution" is used is 500 yen (refer to FIG. 6).

15 Thereafter, transfer of the commodities is performed actually. The delivery charge to be paid back to the participant 41 may be paid by a method wherein it is received when the dealer commodity is shipped. For example, a notification of a result of the delivery charge bearing calculation (step S14) is sent from the auction site to the participant 41 of "abc", and the participant 41 confirms the transaction conditions (step S16). Then, the dealer 51 of "Maruyama Trading" pays the amount of money corresponding to the delivery charge to be borne thereby to the participant 41 of "abc" (steps S17 and S18, L4).

25 Then, the personal seller 31 of "def" forwards the auction commodity "shoes" (step S19). Meanwhile, the dealer 51 of "Maruyama Trading" forwards the auction commodity "shoes rack"

(step S20). The distributor 61 of "TK Express Distribution" collects the auction commodity "shoes" of the personal seller 31 of "def" (L6) and distributes it to the participant 41 of "abc" (step S21). Meanwhile, the other distributor 61 of "MM Express Distribution" collects the dealer commodity "shoes rack" of the dealer 51 of "Maruyama Trading" (L7) and forwards it to the participant 41 of "abc" (step S22, L8). Here, the forwarding of the commodity by the distributor 61 is performed in accordance with a designation of the distributor 61 from the auction server 1 (L5).

Thereafter, the commodities arrive at the participant 41 of "abc", and the participant 41 accept the articles (step S23). Then, the prices for the commodities are paid by a payment-on-delivery method to the distributors 61 of "TK Express Distribution" and "MM Expression Distribution" (steps S25 and S26). In other words, the participant 41 receiving the commodities pays the prices in exchange for the commodities to the distributor 61 (step S24). Then, from the distributor 61 of "TK Expression Distribution" to the personal seller 31 of "def", the price for the pertaining commodity is paid, and from the distributor 61 of "MM Express Distribution" to the dealer 51 of "Maruyama Trading", the price for the pertaining commodity is paid. Consequently, the personal seller 31 and the dealer 51 can acquire the prices for the respective commodities sold therefrom (steps S27 and S28).

Through the procedure described above, a participant in

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information determines, based on the information regarding the distributors 61, a distributor 61 to be entrusted with delivery of the commodity (auction commodity or dealer commodity) to be sold thereby. Further, each of the personal seller 31 and the dealer 51 uses its terminal 3 or 5 to transmit information (first or second distributor designation information) designating the determined distributor 61. Then, the auction information reception storage function and the seller information reception storage function receive and store the information transmitted from the personal seller 31 and the dealer 51, respectively. At this time, the information regarding the distributor 61 for each of the commodities described above is registered (used distributor of FIG. 3 or 5).

The information classification function classifies information relating to auction commodities and dealer commodities (auction commodity information and dealer provision information) based on the distributor 61 which delivers the commodities. In other words, the information classification function classifies the information based on the first and second distributor designation information described above. For example, the information classification function classifies commodities of the same distributor 61 into the same class. Alternatively, the information classification function may classify commodities based on some other information such as a delivery area of the distributor 61.

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With the modified auction system, since commodities for which a common distributor 61 is used are displayed in combination in advance, even if the sales sources of the commodities are different, they are delivered by the single distributor 61. Accordingly, efficient delivery can be anticipated, and further suppression of the delivery cost can be anticipated.

While, in the modified auction system, commodities for which the same distributor 61 is used are displayed in combination, they need not necessarily be displayed in combination. In particular, the auction information transmission function may include and transmit distribution information into and together with information to be transmitted to the participant terminal 4, and the auction function may receive distributor designation information based on the delivery information from the participant terminal 4.

Thus, when the participant 41 of "abc" purchases commodities in combination, it notifies the auction site of the distributor 61 of "MM Express Distribution" which is to be entrusted with the delivery by the participant 41 (step S61). The auction site receiving the notification requests the designated distributor for the delivery, and the designated distributor delivers the commodities. Even in this instance, similar effects to those described above can be anticipated.

While a preferred embodiment of the present invention has been described using specific terms, such description is for illustrative purposes only, and it is to be understood that

